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We are much pleased with our prompt, courteous and reliable printers, Hann & Adair, 108 North High street, Columbus, Ohio, and advise all needing anything in their line to patronize them.

What agriculture needs to-day is more educated, energetic, business young men, to develop it to its highest degree.

As there are seventy-four students in the School of Agriculture of the University this year, a considerable number of whom will take instructions in dairying, only a limited number of students can be accommodated in the special course in dairying during the winter term. All persons, therefore, who wish to take the special course should make application at once.

Ohio State University is to be congratulated on retaining Professor Hunt after the flattering call from a Western university. It is a significant fact that the subject of agriculture, possibly at one time unpopular in many colleges, is becoming to be one of the electives in the curriculum at the University.

The thoroughness of Professor Hunt's methods has made his course in agriculture one of the strongest offered in any agricultural college in America; while his affable manner in the class room changes what might be considered a dull, common place, and theoretical science into a practical, pleasant and interesting one.

It is a common frailty of mankind to discourage any new undertaking. In this age of progress scarcely any thing is begun unless some one prophecies defeat and failure. But from whom proceedeth this advice and discouragement? It is from those who are unsuccessful and in a degree failures themselves.

It is not the successful lawyer or merchant who tells another there is no success or pay in either of these kinds of work; neither is it the prosperous farmer who says farming does not pay and advises his neighbors to abandon it and undertake something new.

When we hear a man criticising conditions and advocating a change in what is already begun, we question the success of his own work. And so it is in journalism; when a newspaper discourages a new undertaking in the field of journalism on account of financial or other reasons, we are apt to say, and correctly, too, that their own work is no howling success.

DURING the last year or two the profits of the farm have been smaller than usual, in many cases scarcely any profits at all. But we look forward and see the future full of hope.

That the last few years have been poor years for the farmer there is no doubt; but it is largely because of

the vast territories that have been thrown open for the production of agricultural products. There have been wonderful inventions in agricultural implements that have tended also to increase the production of agricultural products. In consequence of this the price has gone down.

But now since there are no more territories to be opened we see flattering prospects of a brightening up in the future, and we have no reason to doubt that in the next twenty-five years the farmer will be the most independent man in the whole world. He will own his own farm and make his own living, with a large margin for profit, and will escape the worry and anxiety that the business man in the city has.

Yes, there is a future full of hope for the young agriculturists of this country. So brace up, young boys of the farm.

Push out, and you can make yourself felt in agricultural lines as much as in any other. But obtain first an education, for a man must have brains nowadays and know how to use them to make a success of anything. It should be the immediate ambition of every country boy to attend the State University one or two years at least. This education is in the reach of all those who make the attempt.

The future unfolds itself to the educated man. Life instead of appearing as a dream and ourselves as beings of fate, will appear as something grand and noble. Put on the helmet, fellow farmer boys, and make the attempt to secure an agricultural education, and God will help you, for "God helps them that help themselves."

During the past six weeks Professor Lazenby, Secretary of the School of Agriculture, has received letters of inquiry concerning this branch of the University from eight different States. No better evidence is needed to show that the name and fame of our *alma mater* is gradually extending, and that the School of Agriculture is keeping fully abreast of the other schools of the University.

The Association of American Agricultural Colleges and Experiment Stations will hold its eighth annual convention in Washington, D. C., during four days, beginning Tuesday, November 31, 1894.

Several of the officers of this Association are known to the agricultural students here. One of the vice presidents, Professor G. E. Morrow, of Illinois, will be acting president, and will deliver the president's address, on account of illness in the family of the president, General Stephen D. Lee, of Mississippi. Professor Morrow delivered two lectures at the University two years ago on *The History, Progress, and Future of American Agriculture*. The secretary and treasurer, Professor M. A. Scovell, of Kentucky, delivered two lectures here last spring on *The World's Columbian Dairy Test*. The chairman of the executive committee, Major Henry E. Alvord, of Oklahoma, one year ago last winter gave a lecture on *Milk and its Products*, before the Farmers' and Breeders' Association at the City Hall, and on *Corn Stalks*, before the Agricultural Convention in the Senate Chamber.

The delegates to the Convention from this University are Trustee Godfrey and President Scott. Professors Lazenby and Hunt, and possibly others will probably also attend.

A report of the number and kind of native timber trees in the wood lot just north of the chemical laboratory has been made by the students in the class in arboriculture.

The whole number of specimens is about 700, representing 12 different orders or families.

Among the more abundant species are the following: Beech, 176; white elm, 151; white ash, 56; buckeye, 36; burr oak, 23; black walnut, 18; honey locust, 18; sugar maple, 17; sycamore, 17.

**WM. H. SCOTT, A. M. LL. D.,
PRESIDENT OF THE OHIO
STATE UNIVERSITY.**

A Brief Sketch of His Life.

William H. Scott, who for the past eleven years has been the administrative and executive head of the Ohio State University, is a graduate of the Ohio University in Athens. He com-

pleted the classical course in that institution in the year 1862. The same year he was called to the responsible position of superintendent of the public schools of Athens, and the year following was made principal of the Preparatory Department of his *alma mater*. After continuing in this position for two years he entered the

ministry, and became pastor of the Main Street Methodist Episcopal Church, in Chillicothe.

In the fall of 1869 he became Professor of Greek in the Ohio University and held this chair until 1872, when he was made acting president of the same institution. This position was retained until 1883, when he was called to assume the presidency of the Ohio State University. Since

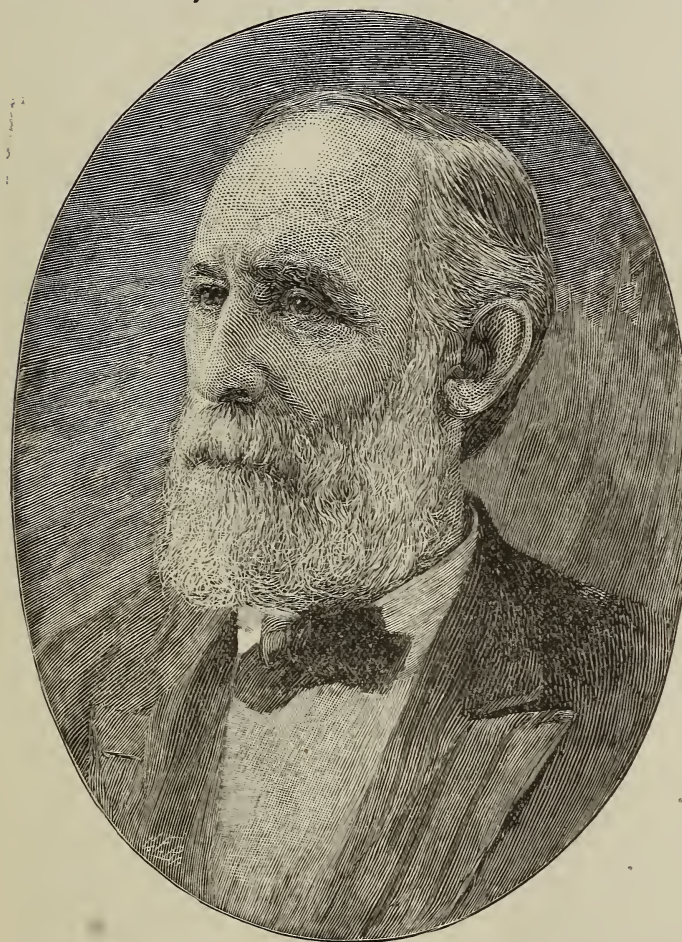
that time President Scott has manfully taken up the duties of his high office, and the growth and development of the University under his administration attests its success. It has been no less honorable to him than creditable to the State.

The executive duties of the University were assumed by President Scott at a time of great difficulty. There were many hostile influences. Students were exasperated because his predecessor had been summarily dismissed, and an unreasoning, but instinctive antagonism, bordering on conspiracy, was developed. But by untiring patience and wise forbearance this ill-natured opposition was gradually overcome, and in the face of all discouragement President Scott steadily carried forward his

administration upon lines so well chosen that he won the confidence and respect of practically the whole student body.

Among the more important elements that have contributed to his success are his simple dignity and strict impartiality.

As chairman of the several commit-



pleted the classical course in that institution in the year 1862. The same year he was called to the responsible position of superintendent of the public schools of Athens, and the year following was made principal of the Preparatory Department of his *alma mater*. After continuing in this position for two years he entered the

tees of the various schools into which the University is divided, President Scott has ever been ready to further the interests of each when they would serve the benefit of all.

The school of Agriculture could not ask for a better friend, and its present prosperity is largely due to his cordial support and hearty cooperation.

Another element of success is the fact that he has been essentially a growing man. Enjoying good advantages in his youth, he has been observing and reflecting much since he attained to manhood, and his store of knowledge and experience has steadily increased. His mental processes are sure, rather than rapid, and what he has once learned he retains.

At the close of the last college year President Scott resigned the presidency of the University, being desirous to lay down the cares of an executive and devote himself to the Chair of Philosophy. As a successor has not yet been chosen, he has kindly consented to serve until some one has been selected to take his place.

Younger and possibly abler men may be found to guide the destiny of our noble University and fill the difficult post of President, but it is doubtful if any man will ever give himself more unreservedly to the discharge of its arduous duties.

The central bench in one of the forcing houses of the Horticultural Department is now filled with chrysanthemums. These were left out as late as possible, and were only transplanted to the house a few weeks ago. The plants are looking well, and there is promise of a fine display of bloom.

We wonder how many of our readers know the significance of the scientific name of the chrysanthemum? It is literally keel-shaped gold flower; from the Latin, *carivia*, a keel; and two Greek words, *chrysos*, golden; and *anthemom*, a flower.

Animal Husbandry and Exterior.

One of the very interesting and practical studies found in the Agriculture course is that known as Agriculture (4), Animal Husbandry and Exterior. The text book used, was written by Armand Goubaux and Gustave Barrier, and translated by Simon J. J. Harger, V. M. D., of the University of Pennsylvania. This book treats of the animal, exclusively from the exterior, considering his external form and characters in relation to his mechanical aptitude and his commercial value.

The student learns what points are desirable in a horse that is to be used for heavy draft; what points are desirable in horses for speed, and on the contrary what points are not desirable. But, besides simply learning that such and such points are desirable he also learns why they are so. The class room work is supplemented by practice with the score card. The student is taken to some herd of cattle or some stable of horses once a week and is required to put into practice what he has learned in the class room. The instructor being with the student can show him where his errors are, and in this way the student will soon become a fair judge of horses and cattle.

The ability to judge depends a great deal upon the individual. Some students have natural ability to judge, and can see a defect much sooner than others. However, there is no doubt but that all will improve their powers in this direction by pursuing this study. We know that some of our best judges were not natural born, but became experts by study and practice.

The student pursuing this study may not become an expert, but it is certain he will become better acquainted with the external conformation of horses and cattle, and will at least be a fair judge of them, while if he had the inclination to further continue his study and practice, he would likely become an expert.

The Dairy School.

A special course in Dairying, in connection with the School of Agriculture of the Ohio State University, will begin January 2, 1895, and last twelve weeks. Butter making as practiced both in the farm dairy and in the creamery will be thoroughly taught. The student will perform all necessary operations in the manufacture of butter by these two methods under the guidance of the instructors. It is believed that butter making can be as thoroughly mastered as twelve weeks of practice will allow. In cheese making it is expected to teach only the principles with elementary practice.

The lectures and practical exercises will be as follows:

Milk Chemistry and Milk Testing—Lectures and laboratory practice, by Professor H. A. Weber.

Dairy Farming—Lectures and recitations of breeds, breeding, feeding, selecting and judging of dairy stock, and upon the equipment and management of dairy farms, by Professor Thos. F. Hunt.

Bacteria in Their Relation to Milk, Butter, and Cheese—Lectures by Professor A. M. Bleile.

The Common Diseases of the Dairy Cow—Lectures by Professor H. J. Detmers.

Care of the Boiler and Engine—Lectures, by W. C. McCracken.

Butter Making—Running separator, churning, working butter, etc., by DeWitt Goodrich and Oscar J. Bailey.

Cheese Making—Practice in the manufacture of cheese, by B. B. Herrick.

In addition to the above it is expected to have special lectures by prominent dairymen and others.

Regular students in the two or four-year course in Agriculture, who take Agriculture (4) in winter term, will have butter making and cheese making in the dairy laboratory, two half-days each week.

The regular students will be taught in a different section from those who

take the special dairy course. Regular students may elect the other subjects taught in the special course, provided their required work will permit.

Candidates under 21 years of age must pass an examination in the common branches. Otherwise no examination is required.

There is an incidental fee of \$5.00 which is charged all students of the University, and a special laboratory fee of \$10.00.

The expenses will vary with the circumstances and the inclinations of the individual.

The *Agricultural Student* estimates the following to be a liberal allowance for expenses:

Room rent.....	\$12.00
Board.....	36.00
Fees.....	15.00
Two white suits @ \$2.00.....	4.00
Books and stationery.....	5.00
Total	72.00

On account of regular students who wish to take the work in butter and cheese making, only a limited number of special students can be accommodated. Applications should, therefore, be filed at once, stating previous experience in butter and cheese making.

Further information may be obtained by addressing the Secretary of the School of Agriculture, Professor W. R. Lazenby, Columbus, Ohio.

MR. DE WITT GOODRICH of Iowa, has been appointed assistant professor of dairying in the School of Agriculture of the Ohio State University. Mr. Goodrich has had a thorough practical training in butter making and farm dairying in the private dairy of his father, C. P. Goodrich, Fort Atkinson, Wisconsin. Mr. De Witt Goodrich is a graduate of the Wisconsin Dairy School and afterward became the instructor in the farm dairy course in that institution. He was the chief butter maker of the World's Columbian Butter Test. During the past winter he was the creamery

instructor in the Cornell Dairy School. Mr. Goodrich is to be assisted in the Dairy School of the Ohio State University by Mr. Oscar J. Bailey, Tacoma, Belmont County, Ohio, as noted in our last issue.

The instructor in cheese making is to be given by Mr. B. B. Herrick, the well-known cheese maker and farmer of Wellington, Ohio, assisted by the above instructors.

Object of Agricultural Education.

It is a puzzle to me why the idea is so often met, that any one who can drive a team or hold a plow, is sufficiently equipped to manage a farm. Why is it that the tendency is so great to educate the son who is to leave the farm in the college and technical school, while the other son, who thinks he is particularly fitted for the farm, is allowed to get what education he can during the winter terms at the district school?

One reason, perhaps, is that farmers fear that college training will lead their sons away from the farm. Now, I think the training at college, at an agricultural college in particular, has an entire opposite effect. It seems to me that the farmer without an education would see all of the drudgery of a farmer's life and few of its pleasures. He would see no interesting investigations to make what would give both pleasure to himself in the study thereof and profit to himself and all his neighbors in the result attained. In the grazing herds, in the billowy wheat field, in the well equipped and well ordered farm he would see nothing of beauty.

If education is not needed to operate a farm, why is it that educated men now stand so far in advance and are always engaged in writing letters of cheer and helpful advice to their brother farmers, through the many worthy agricultural papers? Why is it that they alone seem contented with their lot, while many times their number, much stronger physically,

are seeing, first, a mortgage grow from their half-hearted and unbusiness like management, and then a foreclosure of it? This alone proves that the hope of the farmers ought to be in the education of their sons broadly and liberally if possible, but above all technically.

Farming is, in the first place, a business; and is subject to the laws and methods of business. It is the farm managed in the most business like way that brings the largest returns per annum. But the business of farming widely differs from the dry goods or grocery business, and the like, in that it depends so largely on the natural sciences. Political Economy shows that there can be no prosperity in a country, unless the tiller of the soil is first prosperous. It also shows that the soil yields greater and greater returns as more intelligent and more thorough tillage is resorted to. Now, the object of agricultural education is to make more intelligent farming possible. Its object is to give the student a knowledge of the sciences that underlie every farm operation. Its object is to show the "why" of every operation and the "why" of the certain and inevitable results that follow. Its object is to make, instead of the plodding farmer who is the last to adopt a demonstrated improvement in methods, the wide-awake man, animated with the spirit of progression, who develops improved methods and demonstrates their efficiency.

Give the farmers' sons an education then, that will awaken their powers of observation, broaden their minds, and give them a technical knowledge of agriculture.

The beds of foliage plants in the lawn surrounding Horticultural Hall looked well until overtaken by the severe frost of the morning of October 15. Since then their beauty has departed. The minimum temperature of the morning in question was 23°F.

A Two-Year Three-Course Rotation.

RESULTS OF AN EXPERIMENT ON THE UNIVERSITY FARM.

Wheat, clover and corn make a good three-course rotation in this latitude and climate, especially for dairy-men. Why not get these three crops from the same land in two years instead of three?

The opportunity having presented itself, a trial is being made here of this two-year three-course rotation. We had to begin with an old instead of a new clover sod, a hay crop and a seed crop having been removed in 1893.

This year's crop of hay was cut from 7th to 12th of June. Then from 12th to 16th of June, the ground was plowed as near four inches deep as could be, rolled with tubular open land roller, an excellent tool made by the Bucher and Gibbs Plow Co., of Canton, O., harrowed with spring tooth harrow and again rolled. Then planted with two-horse planter, going over the ground twice, thus putting the rows 22 inches apart instead of 44 inches (the corn was planted three grains every sixteen inches in the row, making 53,460 grains instead of 14,256 grains, the usual number planted for a grain crop—the corn being for soiling and ensilage).

A few days after planting the ground was harrowed with an ordinary iron frame smoothing harrow, three large sections being used, going over the ground at the rate of about sixteen acres per day.

After this the ground was gone over three times, of intervals of about a week with the Zephaniah Breed's weeder, three teeth being removed every twenty-two inches in order to prevent injury to the corn. This stirred the ground slightly and prevented many weeds getting a start. This ended the cultivation, and except a little work with the hoe to prevent Indian mallow seeding no more work was done until harvest time.

Ninety-four and one-half tons, about ten tons per acre, were cut from the field. This cost, exclusive of rent, for growing up to time of harvesting about 40 cents per ton, as may be seen from the following itemized statement :

48 hrs. plowing, man and two-horse team, @ 30 cents.....	\$14 40
12 hrs. harrowing, man and two-horse team, @ 30 cents.....	3 60
10 hrs. rolling, man and two-horse team @ 30 cents.....	3 00
17½ hrs. planting, man and two-horse team, @ 30 cents.....	5 33
5 hrs. shelling seed, man @ 15 cents...	75
6 bu. seed @ 50 cents.....	3 00
AFTER PLANTING.	
8 hrs. rolling, man and two-horse team @ 30 cents.....	2 40
6 hrs. harrowing, man and two-horse team @ 30 cents.....	1 80
17 hrs. weeding, man and horse @ 22½ cents.....	3 82

Total.....\$38 10

The weather was extremely hot when the land was being prepared, and hence the cost was higher than for preparing earlier in the season. This is one of the disadvantages of the rotation. Another disadvantage would be occasional failure to get a catch of clover on some soils. We hope this can be remedied by our being able, in the near future, to sow with not misplaced confidence, some other legume after the removal of the wheat. (More on this in the future.)

The land was badly infested with morning glories (*Convolvulus arvensis*). We think plowing the land at that time of the year gave them a decided back-set—however careful experiments are in progress here in regard to destroying these pests.

The land was found to be in excellent condition when the corn had been removed and two harrowings in opposite directions, with the spring-tooth harrow put it in fine condition for drilling in the wheat, which is now looking well and promises a large yield. The labor cost of putting in the wheat was about \$1.10 per acre.

It seems to me that we have these three crops in two years at about the same labor cost, for preparation and cultivation of soil as would have been

required had but two crops—clover and wheat—been grown; or, in other words, we have ten tons per acre of corn, as a catch crop, for the seed and harvesting.

Another small piece (three acres of new clover sod) instead of being planted to corn, after removing the hay crop, was sown to millet and about one and one-third tons of excellent hay per acre secured. The ground was then again plowed and pulverized, and is now luxuriantly green with growing wheat. The two plowings came only about three months apart. A disk harrow, followed by a spring tooth would probably have done as well as the plowing and one harrowing.

Further reports will be given as the work progresses.

F. P. STUMP.

Our Dairy.

For a number of years there has been a dairy on the University farm; the product of which has been sold to the people of Columbus. Owing to the nearness to the market and because of a demand for first-class milk, this product has sold without being made into butter or cheese. As a rule our milk has been sold for more than that from other dairies selling in the same market. From the first of October until the first of May, it sells for seven cents per quart, and for the remainder of the year six cents per quart.

As far as possible this dairy is managed economically, and has proved profitable. However, its first object is to give instruction to the students. Those students who work in the dairy get, in addition to experience, money with which they can pay a part, and in some instances all, of their expenses while here.

There are a great many dairymen who do not know whether or not they are getting any profit from their dairy. They do not know that they are getting good returns for feed and care. Some are thinking of changing from

butter and cheese making to the retailing of milk. To such, an accurate and detailed account of the expenses and receipts of a milk dairy may be of considerable value. For this purpose we give the expenses and receipts of the University Dairy for the six months ending July 1, 1894. During that time there were in milk about an average of twenty-seven cows. In the winter months each cow was fed, daily, forty pounds of ensilage, three pounds of wheat bran, three pounds of shorts, one pound of new process oil meal and all the clover hay she would eat, which was about five pounds. In the summer months they had the run of ten acres of pasture, were soiled, and had a small grain ration. The soiling began in the early spring with rye, followed by wheat, clover, peas and oats, and corn. The value per ton of the first was estimated as follows: Ensilage, two dollars and sixty cents; hay, six dollars; bran, fifteen dollars and fifty cents; shorts, sixteen dollars and fifty cents; oil meal, twenty-six dollars and fifty cents. The soiling crops were estimated at two dollars per ton, and the pasture one dollar an acre per month.

The following is a summary of the expenses and receipts from twenty-seven cows for the six months:

EXPENSES.

Feeding and care.....	\$ 245.35
Feed.....	525.84
Milking.....	291.28
Delivering milk.....	211.31

Total expense..... \$1273.78

RECEIPTS.

Sale of milk.....	\$ 2198.17
Net Gain.....	924.39

For those who are in butter and cheese dairying, the expense column of the above will not apply so closely to their business as it will to milk dairying. However, the cost of production is near the same in either case; so that the difference in the expenses will be the difference in that of delivering the milk and that of the manufacture and working of the butter and cheese. It might be

added that the cost of the labor for the University Dairy is more than it would be if those employed devoted their whole time to this kind of work.

Forcing Radishes.

Of all the vegetables raised in our gardens, the radish is one of the most profitable. When the weather does not permit its being raised in the field, it can be grown in the hot-bed or forcing house. The crop matures in a very short time. Under favorable conditions the radish will be ready for use in from fifteen to twenty-four days after planting the seed in the small oval and turnip varieties, or in about twice that length of time in the large varieties. The late fall crop is now coming on in our pipe-heated hot-bed. The radishes are planted in drills, the drills being about seven inches apart. In the hot-bed the seed is planted where it is to grow until ready for use, while in the forcing house it is planted in trays first, and then transplanted to the benches. When far enough advanced the radishes are pulled, washed, and put in neat bunches, when they are ready for market, where they command a fair price.

The red skinned varieties are the best for this purpose. A good variety of the turnip form is Henderson's Forcing. A good oval variety is French Breakfast, the long variety, Strasburg and Chartier.

The present fall crop, in the hot-bed, is of the large variety. It was planted about September 15th, and will not be ready for use until about six weeks from the time of planting. Of course, on account of the weather, the sash must be put on before the crop is ready for use. The later crops will be more profitable as they will be more of a rarity.

Fashions change in floriculture as well as elsewhere. A few years ago bouquets were in demand, while loose flowers were scarcely ever called for. The demand to-day is mainly for loose flowers with long stems.

Hon. Horace Wilson.

A few days ago the members of the Columbus Horticultural Society were called to mourn the loss of a life member and ex-President of the society. Horace Wilson has passed away. His death occurred after a brief illness, in the seventy-second year of his life.

An industrious and enterprising man, a good citizen, has gone to his reward. Losing his parents when a mere child, he was compelled to rely upon his own resources, and he early resolved to fully prepare himself for a useful and honorable career.

He was a diligent student, supporting himself by teaching and other forms of labor during intervals of his school and college days. He studied law and continued the practice of his profession throughout his life.

Although a lawyer by training and vocation, Mr. Wilson took a deep and abiding interest in agriculture and horticulture. A large farm situated a few miles from Columbus afforded him opportunity to gratify his tastes for practical agriculture, while his spacious suburban home, with its well kept grounds, including orchard, fruit and vegetable garden, and much ornamental planting, bespoke his zeal and interest in horticulture.

Mr. Wilson was an active and enthusiastic member of the Columbus Horticultural Society, and served two years—1891 and 1892—as its President. As evidence of his great interest in education, it may be stated that for over forty years he was a trustee of the Ohio University at Athens, and served four years as member of the Columbus Board of Education.

Among other positions of honor and trust held by Mr. Wilson may be mentioned two terms in the City Council and one term in the State Senate. The death of such a man is a public calamity. His life should be an inspiration to every earnest young man.

W. H. Jenkins, '94, ate dinner Sunday with a friend at the Columbia Club.;

POULTRY.

SUNBURY, OHIO, Oct. 16, 1894.

I saw in the last issue of THE AGRICULTURAL STUDENT that the poultry editor asked for suggestions regarding experiments with poultry. I would suggest the following experiment; to prove the value of raw ground bone: Two pens to be fed gravel and two pens coarse, ground bone, such as Armour & Co. furnish, or oyster shells, and another two pens fed fresh, raw ground bone.

Yours, etc.,

H. P. MILLER.

We are under many obligations to Mr. Miller for his suggestions.

Directions were given before the receipt of his letter for a test of the value of raw ground bone, and we add, at his suggestion, oyster shells.

The experiment will not follow quite along the lines suggested by Mr. Miller, because the problem is not so much the substitute of one food for another as the feeding of a proper combination of foods.

For example, oyster shells contain a large amount of lime and a small amount of phosphoric acid. Raw bone contains excess of phosphoric acid and possibly a comparative deficiency of lime for the needs of the birds. If oyster shells are fed alone, the chickens may need to eat too much lime to get the requisite amount of phosphoric acid for the yolk. If raw bone is fed alone the chickens may have to eat too much phosphoric acid to get the requisite amount of lime for the shells. This is the theory. The experiment is to determine the proper food.

There has been selected for each division a pen of ten old hens and a pen of ten pullets. In selecting, our aim was to have the divisions as near uniform as possible. There are four divisions of two pens each. First division receives gravel; second division gravel and oyster shells; third division gravel, oyster shells and raw cut bone; and the fourth division

gravel and raw bone. We might have added another pen without gravel and with bone, but did not think it practical to deprive the hens of so common an article as gravel. We did not consider it a question of feeding gravel as a substitute for ground bone, but a question of feeding ground bone in addition to gravel. It is quite probable that the ration containing gravel, shells and bone will be found superior to any one of the other substances. Each division receives as much of the substances allotted them as they want and an account will be kept of the amount eaten. Of course, these substances are in addition to the regular ration. A warm mash, consisting of one-half wheat bran and one-half ground wheat, is fed each morning. As much of this will be given as they will eat up clean in the course of an hour or two. At noon a little wheat is scattered on the ground and at night they get all the grain, either wheat or corn, they will eat up clean. In addition to this, we feed as a disease preventive equal parts of the following mixture: Sulphur, Spanish brown, red pepper and salt. This mixture also acts as a food, in supplying the lesser requirement of the chicken organism, about one heaping tablespoonful is fed, every other day, to one hundred hens.

Purposes of the Swine Department of the University.

The Swine Department of the University farm serves three purposes.

First, *student instruction*. There are many students here who came from the corn raising section of Ohio, where swine raising is the most profitable branch of farming. These students must have access to the line of farming they expect to follow. They should have a chance to study their special line of work, the same as other students. There is only one way to study anything: viz., to get the science with the object before the student.

Second, *experimentation*. The benefit to the farmers of the state is suffi-

ciently indicated by the experiment in feeding elsewhere mentioned.

Third, *profit*. There is a large amount of grain raised on the farm. This grain must be disposed of, and at the price of grain and pork for several years past, the advantage has been in favor of selling pork. In this way much of the surplus grain and waste products around the dairy can be fed profitably.

An Experiment in Progress.

In the September number of the AGRICULTURAL STUDENT the result of a pig feeding experiment was given by the Swine Department. In this experiment whole wheat fed dry gave slightly better results than corn fed in the same way, while a mixture of equal parts of corn and wheat gave somewhat better returns than either feed alone. Another experiment has been started to test again the food value of wheat and corn when fed to pigs, and also to compare several methods of feeding wheat. In this experiment the pigs weighed only seventy-five pounds at the beginning of the experiment, while in the former one the weight was one hundred and thirty pounds per pig when the experiment was begun. In this experiment it is probable, also, that the hogs may be slaughtered to determine the effect of the food upon the carcass.

Sixteen grade Poland China pigs, four months old, have been divided into four lots, as nearly equal in weight and quality as may be. They are an even, thrifty bunch, the sire having been bred by Lampe Bros., of Van Wert county. One lot will receive dry whole wheat, another soaked whole wheat, another ground wheat mixed with water, while the fourth lot will be given dry whole corn. The pigs are confined in small pens, but each pen is allowed to run in a lot of one acre for a half day every other day. This lot is practically free from vegetation, but furnishes ample opportunity for rooting. In the winter, when this opportunity

no longer exists, they will be given sods, cut for the purpose.

An abundance of coal ashes is kept in the pens at all times. Salt and sulphur are given freely and all the clear water that is desired, but no other food except as indicated above. I will make analysis of the wheat and corn from time to time to determine the amount of dry substance consumed.

LOCALS AND PERSONALS.

The band was at Lancaster last Thursday.

Mr. E. W. Cunningham, '94, was visiting friends here last week.

Mr. Sherman Hood, '94, is gardening at Meander.

Dr. Orton took his geology class to Marion Saturday.

L. R. Baldwin was visited by his father Friday.

H. R. Bailey, ex-'96, called on his college friends recently.

F. T. Boesal was called home Monday by the death of an uncle.

J. R. Wells, '97, has accepted a position as foreman of a farm in West Virginia.

C. F. Sprague has been asked to explain why he is seen so often, of late, in North Columbus.

Dr. White was called to Pickerington, Ohio, last week to treat some hogs affected with cholera.

H. J. Waters, Professor of Agriculture at the Pennsylvania State College, visited the University a few days ago.

Professor Morrow will lecture before the Association of Agricultural Students the 10th of November. Subject—"Some Privileges of Educated People."

Prof. C. W. Plumb, Director of the Indiana Experiment Station, will deliver a series of lectures on "Stock Breeding," some time during the winter.

Lost—On a Mt. Vernon car, October 11, a few smiles, many blushes and a green ribbon. Finder please return to this office and receive reward.

J. E. Graham, ex-'98, who has been in Kansas and Missouri for the past two months, stopped in Columbus a few hours last Monday while on his way home.

Mr. J. F. Bentley, proprietor of Diamond Dust Creameries at Circleville, has written that he will present to the University one of his lightning calculators, for use in the Dairy Department.

Professor Hunt and his classes visited McLaughlin Bros.' stables of Percheron horses, W. B. Smith & Sons' herd of Holstein cattle and the stables of Shetland ponies at the Imbecile Asylum.

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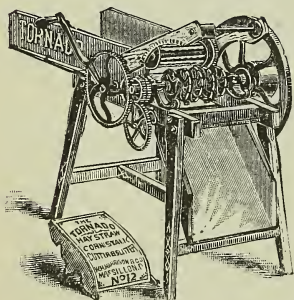
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